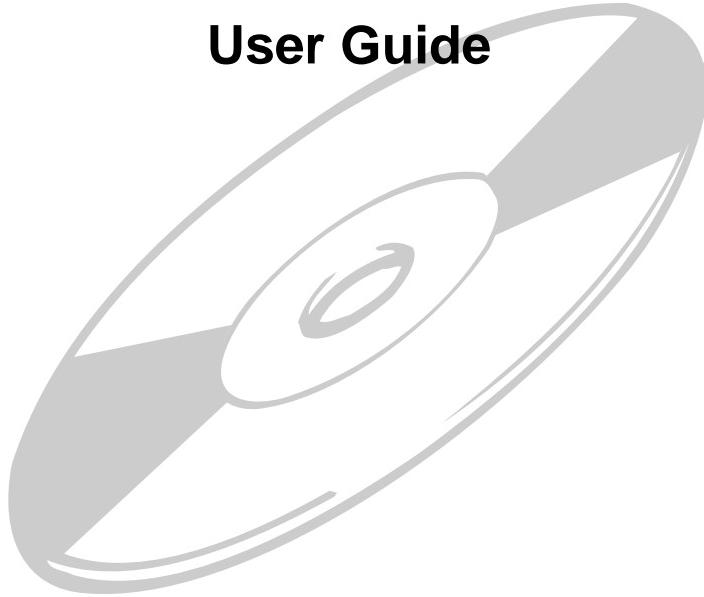




## User Guide



**YAMAHA**

**EX**

# Introduction

## Welcome

Thank you for purchasing, and welcome to — the Yamaha CDR100/102. Before using CDR100/102, please read through this *Operation Guide*.

## What is CDR100/102?

The Yamaha CDR100/102 allows you to record data onto Compact Disc Recordable (CD-R) discs. It can also be used to play discs just like a typical CD-ROM drive\*. CD-ROM is an acronym for Compact Disc Read Only Memory, which is a read-only medium, so you can read data, but you cannot record new data.

CDR100/102 uses a special kind of disc for recording. Its appearance is similar to that of a typical CD-ROM, however, the base material, manufacturing techniques, and recording principles are different. CDR100/102 uses a laser to write data to disc. Once the laser light hits the disc, the color and reflective qualities of the disc change. Since this reflective quality cannot be changed after initial exposure, the data cannot be erased or changed.

Now that multimedia, which encompasses text, graphics, audio, and video, has become a reality, CD-ROM, with its 550MB to 650MB storage capacity, has an important supporting role to play.

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\* CDR100/102 will not play commercially made discs whose center-hole location does not conform to the Orange book specification.

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## **CDR100/102 Features**

### **4xS Recording & Reading (CDR100)**

### **2xS Recording & 4xS Reading (CDR102)**

CDR100 is the first CD-ROM recorder capable of recording at quad speed (4xS). This means a significant time saving for CD-ROM production. Both the CDR100 and CDR102 can record at double speed (2xS) and normal speed (1xS), and read discs at quad speed (4xS). CDR100 records at a maximum speed of 4xS. CDR102 records at a maximum speed of 2xS.

### **Dual Use: Record and Play**

As well as recording CD-ROM and CD-DA format discs, CDR100/102 can play them, too. For these two formats, CDR100/102 functions just like a typical CD-ROM drive.

### **Compact body**

A compact size - approximately the size of an internal 5.25 inch floppy disk drive (half-height type) - allows you to build the unit into your system architecture easily.

### **SCSI2 for High-Volume, High-Speed Data Transfer**

CDR100/102 features SCSI2—the Second generation SCSI interface for connecting computers and peripheral devices. SCSI2 provides high-speed transmission for large volume data, especially important when working with image data.

## **Orange Book Part 2 Compatible 3-Mode Recording**

CDR100/102 conforms to the three recording modes outlined in the Orange Book Part 2: Track At Once, Multisession and Disc At Once.

### **Track at Once**

In this mode, data can be recorded to disc a track at a time. However, the disc cannot be played until the final recording is made.

### **Multisession**

In this mode, data can be recorded to disc one track at a time, and the disc can be played in-between recording sessions.

### **Disc At Once**

In this mode, data can be recorded to an entire disc in one go. To use this mode, your software must support Disc At Once recording.

## CD-R Discs

Yamaha have developed two discs, use the discs below, or conventional CD-R discs that conform to the Orange Book Standard.

- CDM12Y63 (12-cm)
- CDM12Y74 (12-cm)

Using discs developed and manufactured by Yamaha will minimize the occurrence of errors during writing operation, and will ensure compatibility when you read data from the disc using another manufacturer's CD-ROM drive.

When using the "TRACK AT ONCE" recording mode, do not try to play the disc until it has been finalized (i.e., until the lead in/out information has been written), otherwise errors or malfunctions may occur. Likewise, trying to play a blank disc (i.e., a disc that has not yet been recorded) in a CD-ROM drive, CD player, or CD-I player may cause malfunctions and disc scratches.

## Controlling Software

CDR100/102 is a platform independent software controlled device. It can be used in MS-DOS, Windows, Macintosh, and UNIX environments. Before purchasing software, make sure that it supports CDR100/102 and your computer platform.

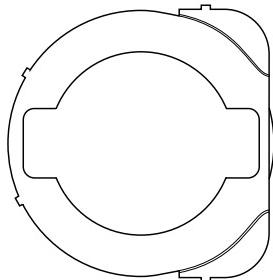
## **CD Caddy and 8-cm disc adaptor (Option)**

Use a Yamaha CD Caddy designed for the CDR100/102, or an equivalent caddy marked with the logo  . Using another type of CD caddy may prevent the drive from operating at optimal performance and may cause malfunction.

Also, use a dedicated Yamaha disc adaptor (item number: ADP 08) for the CDR100/102. Using another type of disc adaptor may prevent the drive from operating at optimal performance.

Use the disc adaptor only for 8-cm Compact Discs and CD Write-Once Discs.

- 8-cm disc adaptor (option)

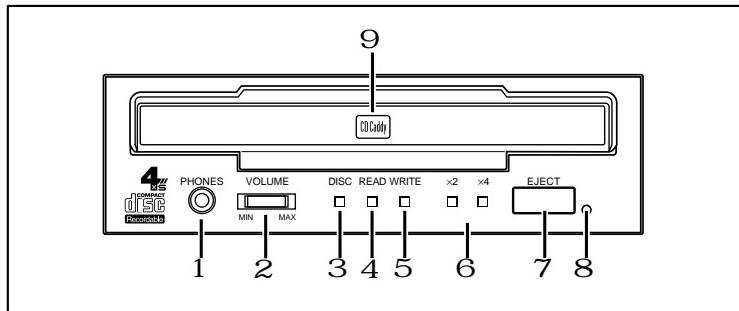


***Note:** The disc adaptor is dedicated to the CDR100/102. Use of the adaptor on other devices may cause malfunction.*

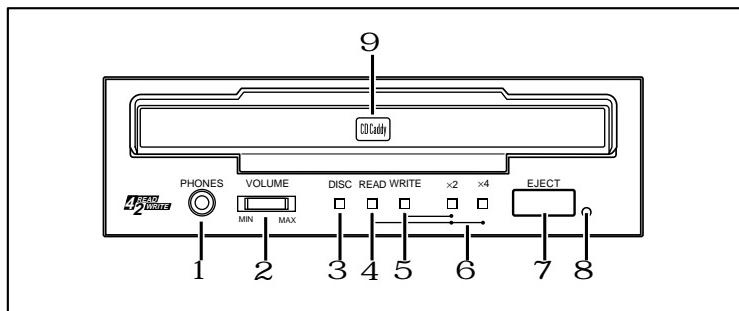
# Chapter 1 – Touring Around CDR100/102

## Front Panel

**CDR100**



**CDR102**



### 1 PHONES jack

This stereo mini jack allows you to connect headphones.

### 2 VOLUME control

This control adjusts the volume level of the PHONES output.

### 3 DISC indicator

This indicator flashes when loading and ejecting. It remains on when CDR100/102 contains a disc. If a disc is not inserted into the caddy correctly, or the caddy does not contain a disc, the DISC indicator stops flashing and the caddy is ejected.

### 4 READ indicator

This indicator flashes when data is being accessed. It remains on when disc data is being read, and when CDR100/102 is ready to record.

*Note: DISC and READ indicators flashing together indicates an error.*

### 5 WRITE indicator

This indicator lights up when recording to disc. In Test mode, it flashes.

### 6 X2/X4 indicators

These indicators show the speed: 2xS or 4xS. When both are off, the speed is 1xS. When CDR100/102 is reset, these indicators first go out, then both come on for an instant, then the X2 indicator goes out, leaving just the X4 indicator on.

### 7 EJECT button

This button is used to eject the caddy.

### 8 Manual eject hole

This is used to manually eject a caddy that cannot be ejected in the normal way. It is for emergency use only.

### 9 CD Caddy insertion slot

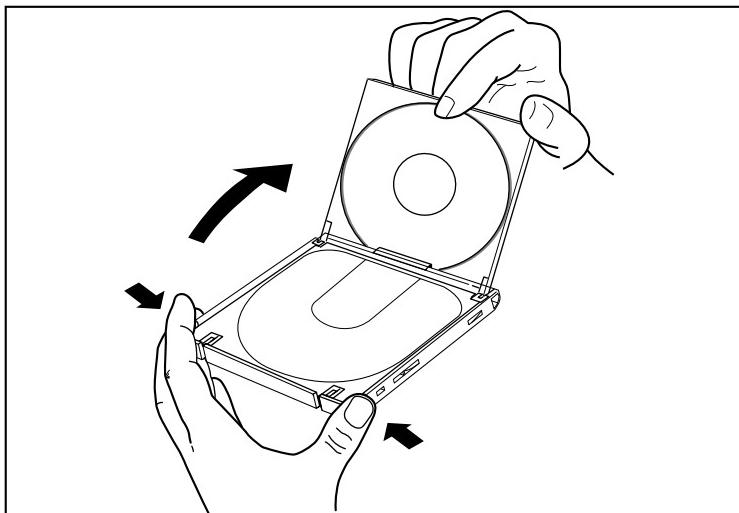
The CD Caddy is inserted here. A protective flap covers the slot.

## Chapter 2–Operation

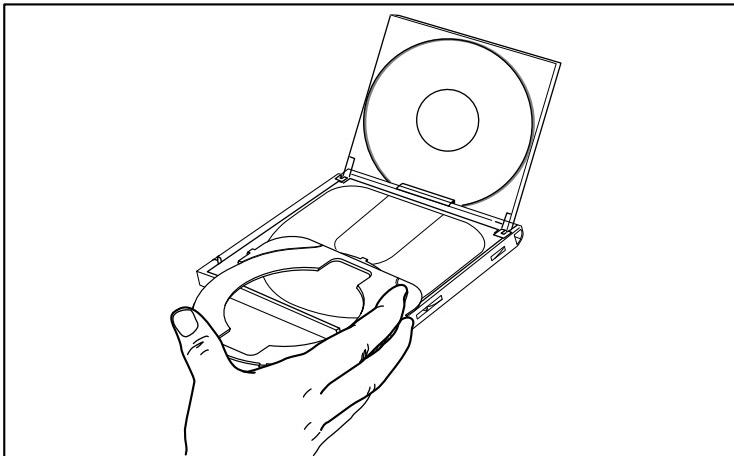
### Inserting a Disc into the Caddy

Discs must be inserted into the CD Caddy before they can be used by CDR100/102.

1. **To open the caddy, squeeze the OPEN levers together with one hand, and lift up the plastic lid with the other hand.**

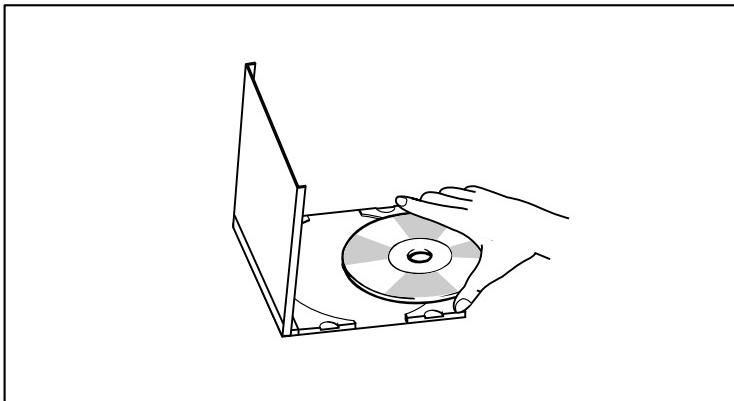


2. If you are using an 8-cm disc, insert the adaptor (option) into the caddy.



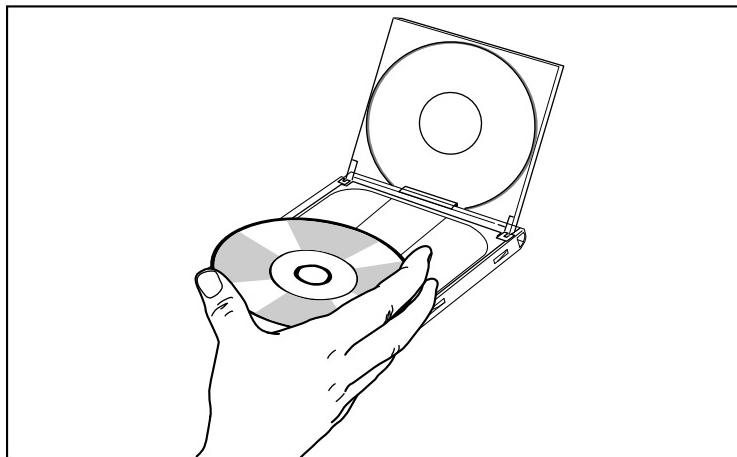
*Note:* The adaptor (option) is designed for exclusive use with CDR100/102. It may not work correctly with other devices.

3. Remove the CD-R disc from its jewel case.

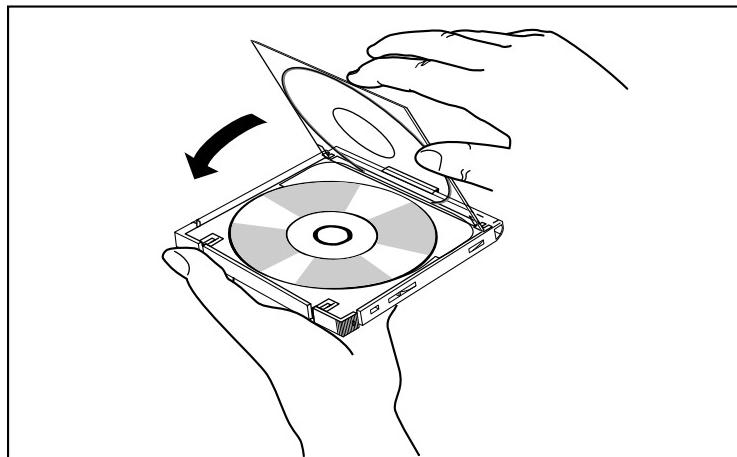


**Important:** Take great care when handling CD-ROM discs. They are more sensitive to damage than audio CDs, and the slightest scratch can render a disc useless. Do not expose discs to dust, dirt, or moisture.

4. Carefully insert the disc, label-side up, into the caddy.

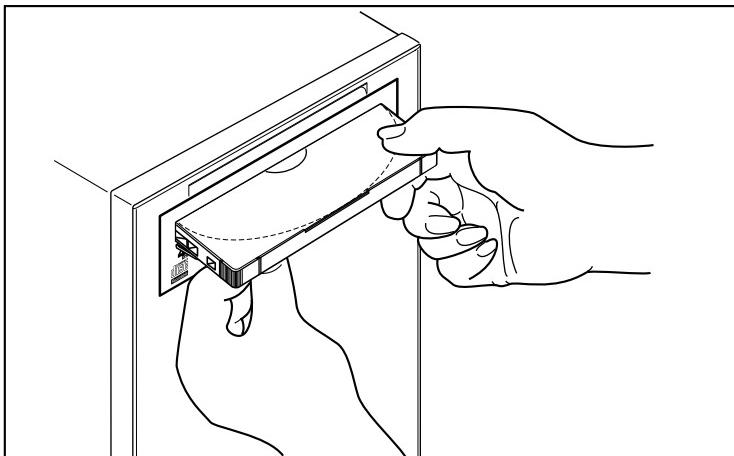


5. Close the lid making sure that both catches click shut.



## Inserting the Caddy into CDR100/102

1. Hold open the CDR100/102's protective flap.
2. Insert the caddy with its arrow mark facing up and forward into the CD Caddy insertion slot.



**3. Push the caddy carefully in until CDR100/102 accepts it.**

The DISC indicator flashes while the caddy is loading, and while the disc is being checked. It remains lit once the disc has been loaded successfully.

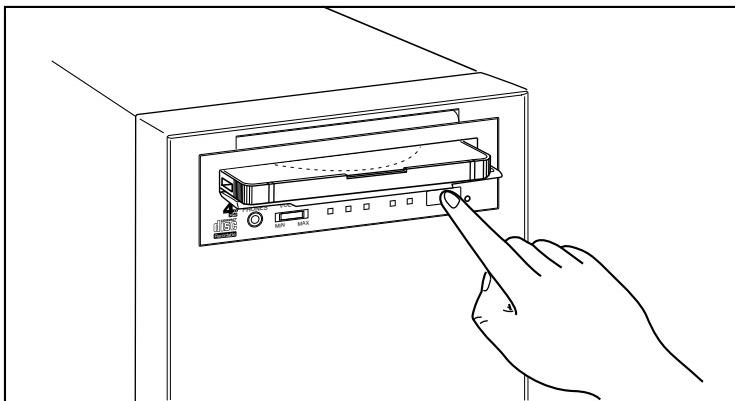
If the disc is not loaded in the caddy correctly, or the caddy does not contain a disc, the DISC indicator stops flashing and the caddy is ejected.

When the caddy has loaded successfully, it takes about 20 seconds before the CDR100/102 is ready for use. When adding new data to a multisession disc, it may take several minutes before CDR100/102 responds to commands from the host computer.

*Note: Do not attempt to insert the caddy while the X2 and X4 indicators remain on after performing a reset. If you insert the caddy too soon, it may get caught by the mechanism. If it does, it will eject automatically after a while. Once this happens, make sure that you power off CDR100/102, then power on before proceeding. You may need to power down your system before powering down CDR100/102. Consult your system dealer.*

## Ejecting the Caddy

1. To eject the caddy, press the EJECT button.



*Note:* Some software prohibits the use of the EJECT button, so a caddy cannot be ejected in this way. Please refer to the instructions supplied with your software.

2. Once it has ejected, remove the caddy by hand.
3. Remove the disc from the caddy and return it to its jewel case.

The caddy cannot be ejected while CDR100/102 is reading or writing a disc.

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